

BE (EXTC) SEM III (Rm) May 2013  
mobile comm. sys. 14/5/13

1st Half-13-Mina - (c)-60

Con. 7735-13.

GS-5449

(REVISED COURSE)

(3 Hours)

[ Total Marks : 100

- N. B. : (1) Question No. 1 is **compulsory**.  
(2) Attempt any **four** questions out of remaining **six** questions.

1. (a) Explain the various nonlinear effects in FDMA. 5  
(b) Explain fast associated and slow associated control channels in GSM. 5  
(c) What is umbrella cell approach ? 5  
(d) Explain variable data rate transmission in CDMA. 5
2. (a) Discuss IMT 2000 system. 10  
(b) With neat diagram, explain reverse CDMA channel. 10
3. (a) Draw and explain GPRS architecture. 10  
(b) Explain with neat diagram mobility management in CDPD. 10
4. (a) Explain signal processing in GSM. What is the use of interleaver ? 10  
(b) Explain handoff and power control in 3G system. 10
5. (a) Discuss forward W-CDMA channel. 10  
(b) Compare SDMA, TDMA, FDMA and CDMA. 10
6. (a) Derive relationship between S/I (signal to interference ratio) and cluster size N. 10  
(b) For the two-ray ground reflection model, derive the expression for received power at a distance 'd' from the transmitter. 10
7. Write short notes on (any two) :— 20
  - (a) Sectoring in GSM
  - (b) Knife edge diffraction model
  - (c) Effect of Doppler spread on fast fading and slow fading.